

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/016172

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ F16C32/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ F16C32/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 2002-39178 A (Ebara Corp.), 06 February, 2002 (06.02.02), Fig. 1 & EP 1176325 A2 & US 2002/11754 A1	1, 2 3, 4
X Y	JP 7-12125 A (Shimadzu Corp.), 17 January, 1995 (17.01.95), Fig. 1 (Family: none)	1, 2 3, 4
X Y	JP 9-84214 A (Yaskawa Electric Corp.), 28 March, 1997 (28.03.97), Fig. 1 (Family: none)	1, 2 3, 4

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"&" document member of the same patent family

Date of the actual completion of the international search

21 January, 2005 (21.01.05)

Date of mailing of the international search report

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Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X- A	JP 6-229419 A (Seiko Seiki Kabushiki Kaisha), 16 August, 1994 (16.08.94), Fig. 4 & EP 632209 A1 & US 5666013 A & DE 69414919 C	1 2-4
X A ✓	JP 10-70865 A (Ebara Corp.), 10 March, 1998 (10.03.98), Fig. 3 (Family: none)	1 2-4
X A	JP 8-145056 A (Ebara Corp.), 04 June, 1996 (04.06.96), Fig. 1 (Family: none)	1 2-4
Y ✗	JP 11-22730 A (Koyo Seiko Co., Ltd.), 26 January, 1999 (26.01.99), Claims 1 to 3 (Family: none)	3, 4